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ABSTRACT

This report summarizes a study in which social studies teachers were surveyed to discover teachers' attitudes towards computers, teacher access to computers, teacher use of computers, the types of computer programs used by teachers, and the perceived need for computer training. A national sample of social studies teachers (n=405) was surveyed as well as a sample of social studies teachers (n=63) in Texas. There was little overall difference between the responses of the national sample and those of the Texas sample. The findings of the study include the following responses: social studies teachers have a very positive attitude toward computers; they have wide access to computers; large numbers of teachers do use computers in their work; and social studies teachers not only need but desire training in, for example, software availability and effective classroom techniques. A 9-item bibliography is included. (DB)

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ARE SOCIAL STUDIES TEACHERS USING COMPUTERS?

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The spread of microcomputers has been phenomenal. In 1977 Apple, Commodore, and Tandy began selling microcomputers. For the first time computer power was available to the masses, including teachers. This "power" needs to be put into context. The TRS-80 by Tandy/Radio Shack was 16K and programs were loaded and saved on cassette tapes. A small, but significant, step.

By 1983, Time magazine didn't give its usual Man of the Year award, instead it gave a Machine of the Year award to the microcomputer. At that time they stated:

"The 'information revolution' long predicted by futurists has arrived, bringing dramatic changes in the way people live and work, and think." It went on to predict: "America will never be the same" ("The Computer Moves In" 1983).

Schools joined in the use of computers.

---Chambers and Bork (1980) found that 54% of all school districts used computers for computer assisted instruction (CAI).

---Hassett (1984) found that 86% of high schools, 81% of junior highs, and 62% of elementary schools were using computers.

---Goodspeed (1988) found that there was a 25% jump in the

number of computers used in 1987 over the previous year. A total of 2.03 million computer were in use in classrooms in that year.

While it was clear that computers were in use in schools one could ask:

---Who is using the computers?

---For what purposes are they being used?

---Are the computers used primarily for literacy and programming courses?

---Are they being used primarily in math and science courses?

---Or, are social studies teachers using them too?

Previous research reported by Ehman and Glenn (1987) indicated that there was little reported use by social studies teachers due to lack of training, poor software, and competition from teachers in other subject areas. On the other hand, Rooze and Northup (1886) described over 200 software programs for social studies. A recent revision of that book (1989) describes over 300 programs. A study by the Office of Technology Assessment, reported by Siven and Bialo (1988), also reported that software in social studies was abundant, in fact more numerous than software in language arts, math, reading, or science.

So the question arises, are social studies teachers using computers? To answer this question I created a questionnaire to be completed by social studies teachers. This research was supported by a grant from the McMurry

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College Faculty Development Committee. I am also indebted to Dr. Gene Rooze of Texas Tech who reviewed the questionnaire and co-authored an article on the research which has been published in Social Education (April/May, 1990), the journal of the National Council for the Social Studies.

The questionnaire was distributed to two samples, one was a national sample of members on the National Council for the Social Studies and the other consisted of members of the Texas Council for the Social Studies. In this presentation I will present the results from both groups.

The Method

The NCSS has approximately 25,000 members. They provided a systematic sample of 1900 of their members who were not members of the college or supervisors sub-group. This was done so the sample would consist of classroom teachers. From this list, 800 were randomly selected to receive the questionnaire. Of those, 483 questionnaires (60.38%) were returned. Seventy-eight of these questionnaires were from persons who did not teach in a K-12 classroom. These were eliminated, leaving 405 responses to be analyzed.

The state respondents came from members of the TCSS, the state affiliate of NCSS. TCSS membership stood at approximately 1600 at the time of the study. One hundred members were randomly selected for the study (6.18% of the

membership). Of those, 63 responses were received. Thus, the response rates of 60 and 63% for the two samples were extremely consistent and high enough to provide reliable data. The following table portrays the demographic data.

TABLE 1

DEMOGRAPHICS OF SURVEY RESPONDENTS

VARIABLE	NATIONAL		STATE	
	N	%	N	%
Gender				
female	203	50.12	43	68.25
male	199	49.14	20	31.75
no response	3	.72	0	0
Teaching Experience				
0-5 years	60	14.81	8	12.70
6-10 years	46	11.36	15	23.80
11+ years	298	73.58	40	63.50
Primary Subject Taught				
elementary	35	8.64	9	14.30
history	210	51.85	32	59.30
government	55	13.58	12	22.20
geography	36	8.89	4	7.40
economics	24	5.93	4	7.40
other	40	9.87	2	3.70
no response	5	1.23	0	0

The demographic information on the respondents is interesting in that there is a great deal of similarity in the data. In years of experience, for example, the

percentages are approximately equal. Some might be surprised by the high percentage of teachers with 11+ years of experience; however, a report by the National Education Association (1987) found that the average female teacher has slightly over 11 years experience and the average male teacher has nearly 17 years experience. Thus, the respondents reflect the reality that most teachers are experienced professionals. The distribution of teachers by primary subject matter is also quite consistent. It is no surprise that history teachers predominate. One might question the low number of elementary teachers, however, if elementary teachers join any content area group, reading seems to be the group of preference. Both NCSS and TCSS have been making attempts to attract elementary teachers into their membership in the past few years. Thus, the sample is a reflection of the memberships of the groups rather than all teachers who might teach social studies during some part of the school day.

The national respondents are almost equally split between male and female teachers while the state respondents are approximately 2/3 female to 1/3 male. We know that most teachers in the country are female, so the state respondents may more accurately reflect the true population. It is not known whether Texas teachers have a higher percentage of female teachers than the nation as a whole, however, both groups have an adequate number of respondents of each gender so that the findings should be accurate.

The Findings

What are teachers attitudes about computers? Do they see them as a fad, as a costly frill, or as technology which has value and potential? This is an important question because no matter how great a technology or methodology is, if it is not accepted and valued by teachers, it will not be used.

TABLE 2

SOCIAL STUDIES TEACHERS ATTITUDES ABOUT COMPUTERS IN THE CLASSROOM

CHOICE	NATIONAL %	STATE %
Computers have value and will eventually be used more.	70.12	72.70
Computers are a fad and will eventually go away.	2.22	0
Computers have good potential but because of cost factors will not be used to any great extent in social studies	15.31	27.30
No response	12.35	0

From this data it is clear that both groups of teachers have strongly positive attitudes toward the use of computers and their potential for the classroom. Almost no one felt that computers are a fad that will disappear.

If teachers see value and potential in the use of computers, then are computers accessible to them? Statistics show that computers have been bought by schools but do social studies teachers have access to them? In what way are they available and what brands are available? These questions were asked to both groups surveyed. The results are as follows:

TABLE 3

AVAILABILITY OF COMPUTERS TO SOCIAL STUDIES TEACHERS

VARIABLE	NATIONAL		STATE	
	N	%	N	%
Access to computers	340	83.95	49	87.80
Manner Available*				
Computer lab	247	72.65	33	67.30
Portable/circulating	107	31.47	16	32.70
1 or more permanently				
in the classroom	53	15.29	7	14.30
Library/LRC	37	7.94	4	8.20
Other	11	3.24	5	10.20
Brands*				
Apple	306	90.00	43	87.80
IBM	66	19.41	8	16.30
Tandy/Radio Shack	42	10.37	2	4.10
Commodore	39	11.47	6	12.20
Other	12	3.53	1	2.00

* Since more than one brand of computer or more than one type of access is possible in each situation, the total of the percentages is greater than one hundred.

The similarity between the national and state results is amazing! The percentage of accessibility, the manner in which computers are available, and the brands that are

available are almost identical.

The results are also quite clear. A vast majority of social studies teachers do have access to computers. While a computer is not in every room and, perhaps not immediately available, they are accessible in some form. The computer lab is clearly the most dominant form of availability with circulating computers a distant second. Only a small minority have the luxury of having a computer permanently in their classroom.

In a recent conversation, Jim Lengle of the Apple Corporation said that purchases of single computers to be placed in a classroom is currently a large part of their business. He feels that many school districts are going in this direction. One software company, Tom Snyder Productions, is currently developing and marketing software programs to be used in classrooms which have only one computer. Such programs are useful for either a computer permanently located in the room or for those who have a circulating computer which they can use from time to time.

The findings substantiate the dominance of Apple computers, as reported by Goodspeed (1988). This is not surprising given the Apple's early entrance into the education market and the wide array of software programs developed for this machine. The MSDOS operating system (IBM and compatibles) are making inroads. Most software developers today are creating products for both Apple and MSDOS simultaneously. It could be expected that the gap

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will narrow in the future.

Knowing that computers are accessible to most social studies teachers, the next question that comes to mind is, do social studies teachers use computers? TABLE 4 reports the percentage of use by those in a variety of categories.

TABLE 4

COMPUTER USAGE AMONG SOCIAL STUDIES TEACHERS

VARIABLE	NATIONAL %	STATE %
Usage by total sample	45.93	36.51
Usage by those who have computers available	54.71	46.90
Usage by Gender		
female	45.32	34.90
male	46.23	40.00
Usage related to experience		
0-5 years	33.33	12.50
6-10 years	58.70	46.70
11+ years	46.64	35.50
Usage related to subject taught		
elementary	68.57	22.22
history	43.33	50.00
social science	44.38	23.80

While Texas is a leader in computer education for K-12 students, social studies teachers of the state do not use computers in their instruction as frequently as do teachers nationwide. Of the variables included in Table 4, only Texas history teachers use computers more frequently than do their national counterparts.

There has been discussion of gender bias in the use of computers favoring males. If this is true, one might expect that female teachers would be less likely to be trained to use computers and, thus, less likely to use them in the classroom. Any suspicion that male social studies teachers are more likely to use computers than female social studies teachers is completely negated by the evidence of this study. In both the national and state samples the percentage of use is approximately equal.

In relation to years of experience, one might assume that those with fewer years of experience are likely to be chronologically younger and therefore more likely to have had computer training in school. If this assumption held, then one might expect teachers with less experience to have a higher percentage of computer use than the other categories. Such an assumption is also not true. In fact, in both samples the least experienced teachers were less likely to use computers while those with 6-10 years were the most likely to use them.

A final comparison grouped elementary teachers, history

teachers (the most numerous in both studies), and other social science teachers. Statistically, in the national survey, the elementary teachers used computers significantly more than expected, based on a chi square analysis. This finding is very tentative since this group only represented 8% of the total sample. In the Texas sample, elementary teachers were least likely to use computers. This contradiction might provide a interesting question for additional research.

Now that it has been determined who and to what extent computers are used, another question is how are computers used. Table 5 presents that data.

TABLE 5

TYPES OF COMPUTER PROGRAMS USED

TYPE OF PROGRAM	NATIONAL		STATE	
	% using	% listing as main use	% using	% listing as main use
simulation	60.21	23.66	43.50	21.70
word processing	53.23	29.04	65.20	34.80
drill and practice	43.01	18.28	26.10	8.10
database	32.80	11.29	38.10	9.40
tutorial	30.64	5.38	34.80	8.70
problem solving	24.73	6.99	30.40	4.30
other	8.06	4.30	21.70	13.00
no response		1.03		

This data demonstrates that no one type of program predominates teacher use. The use of word processing programs are most likely used for the preparation of materials rather than as tools for the student. The programs listed in the "other" category are also for teacher use and consisted of gradebook programs, test generators, graphic, and graphing programs. One difference between the two groups was a lower reported use of drill and practice programs and a greater use of database programs by Texas teachers. It seems healthy that a variety of programs are being used. No one need fear that the computer is only serving as an electric workbook.

A final area of concern was that of training. Since a majority of teachers have more than 11 years teaching experience, these teachers were trained before computers were readily available. While many have received additional training in computer use, many could use computers more effectively if they had additional training. Respondents were asked to indicate areas in which they needed additional training. Responses indicate not only a need but a desire for training. Since most respondents listed more than one area, the percentages add to much more than 100%. Table 6 specifies the areas in which social studies teachers need more training. This should be of special interest to principals, curriculum directors, and social studies

supervisors.

TABLE 6

PERCEIVED NEED FOR TRAINING

TOPIC	NATIONAL		STATE	
	%	RANK	%	RANK
awareness of available software	66.91	1	63.00	1
effective classroom techniques	55.56	2	51.90	2
using computers to develop thinking	55.56	2	31.50	7
preparing databases	42.96	4	38.90	5
using spreadsheets	40.25	5	35.20	6
using word processing	38.52	6	40.70	4
basic computer operations	34.81	7	46.30	3
authoring programs to create software	33.09	8	27.80	8
characteristics of types of programs	29.63	9	25.90	9
using telecommunications databases	28.64	10	14.80	10

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